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THE
ANTHROPOLOGICAL REVIEW.

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ON THE SCIENCE OF LANGUAGE.*

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IN the year 1861, Professor Max Müller, at the request of the Royal Institution of Great Britain, delivered a series of lectures on the Science of Language.† These lectures have since been brought out in a separate volume, with many learned notes and additions; which, in 1862, had reached a third edition. The work embraces nearly everything that could be treated of on the science of language; as the growth in contradistinction to the history of language; the empirical, theoretical, and classificatory stages; the genealogical and morphological classification of languages; comparative grammar; the constituent elements of language; and the origin of languages. These heads include phonetic decay, dialectic regeneration, a discourse on modern languages and dialects, demonstrative roots, the terminational stage, and the natural selection of roots. Although I feel quite unable to criticize, in the way that it deserves, any work from the pen of so distinguished a linguist as Professor Müller, I will nevertheless take the liberty of making a few remarks upon his arduous undertaking. Professor Müller says: "I had lived long enough in England to know that the peculiar difficulties arising from an imperfect knowledge of the language would be more than balanced by the forbearance of an English audience; and I had such perfect faith in my subject, that I thought it might be trusted even in the hands of a less skilful expositor." Any one who has carefully read through the work will doubtless be of opinion that Professor Müller had no need of any forbearance whatever;

* The present article is based upon a paper read before the Anthropological Society of London, June 9th, 1863.

† Lectures on the Science of Language, delivered at the Royal Institution of Great Britain in April, May, and June, 1861, by Max Müller, M.A. London: 8vo, 3rd ed. Longman: 1862.

and that it would be quite as well if authors of the present age would take example from his simple and unaffected style.

Philologists have for a long time bewildered themselves and the rest of the world in their search after a primitive language; and the number of theories thereon, and on the origin and affinities of some of the principal languages, is somewhat amusing. Dr. Murray derives language from nine principal roots, viz., *ag*, *bag*, *ewag*, *dwag*, *mag*, *nag*, *rag*, *swag*, *tag*,* a theory which I shall take the liberty of christening from the doctor's own roots, the *tag-rag* or *c(w)ag-mag* theory. Dr. Schmidt, in a homœopathical manner, derives all Greek words from the root *e*, and all Latin words from the arch-radical *hi*,† in which he and I do not agree.

Most Eastern writers give the preference in point of antiquity to the Syriac: Camden and many learned writers ascribe priority to the Chaldee. Dr. Webster says, "the descendants of Noah journeyed from the East, and settled in the plain of Shinar, or in Chaldea; that the language used at that time by the inhabitants of that plain must then have been the oldest or the primitive language of man; and this must have been the original Chaldee." The Jews contend that the Hebrew language was the most ancient; and with them many Christian writers agree, as Chrysostom, Augustin, Origen, Jerome, among the ancients; Bochart, Heidigger, Buxtorf, Selden, and Dr. Sharpe, among the moderns. Guichard‡ maintained that as Hebrew was written from right to left, and Greek from left to right, Greek words might be traced back to Hebrew by being simply read from right to left. Lord Monboddo says, "I have supposed that language could not be invented without supernatural assistance; and, accordingly, I have maintained that it was the invention of the dæmon kings of Egypt, who, being more than men, first taught themselves to articulate, and then taught others. But, even among them, I am persuaded there was a progress in the art, and that such a language as the Shanskrit was not at once invented."

The Arabs very reasonably dispute the priority of antiquity with the Hebrews; whilst the Armenians consider their language the most ancient, because the ark first rested in Armenia. Again, some authors maintain that the language spoken by Adam is lost, and that the Hebrew, Chaldee, and Arabic are only dialects of the original lan-

* Cf. Max Müller, p. 343.

† Ibid., cf. Curtius, Griechische Etymologie.

‡ L'Harmonie Etymologique des Langues Hébraïque, Chaldaïque, Syriaque, Greque, Latin, Française, Italienne, Espagnole, Allemaude, Flamende, Anglaise, etc., par Estienne Guichard. Paris: 1806.

guage; and that Abraham spoke Chaldee before he passed the Euphrates, and that he first acquired a knowledge of Hebrew in the land of Canaan. According to Reading, the Abyssinian was the primitive language; Stiernhielm and Rudbeckius contend for Swedish; Verstegan, Junius, and Ray for Saxon; Skinner for Belgic and Teutonic; Lye for Icelandic; Salmasius, Boxhorn and Aurelius for Scythian; Hugo for Latin; Erixi for Greek: whilst others, with more love for their country than for truth, have traced Greek and Latin to German and Celtic. Indeed some have gone so far as to assert that Hebrew and its sister dialect, the Phœnician, are based upon Celtic. Court de Gébélin, in a work in nine quarto volumes,* endeavours to derive Latin and French from a pretended primitive tongue. He considers speech as an instinct, and every language as a dialect of what he calls "primitive, inspired by God Himself, natural, necessary, universal, and imperishable." He treats Persian, Armenian, Malay, and Coptic as dialects of Hebrew; derives Latin from Celtic; and discovers Hebrew, Greek, English, and French words in the idioms of America. Herodotus† tells us, that in consequence of a dispute between the Egyptians and Phrygians concerning the antiquity of their respective languages, Psammetichus, king of Egypt, ordered two children to be brought up with a prohibition that no word should be pronounced in their presence, but that nature should be left to speak for herself; and that the first word they uttered was *βεκκος*, which in Phrygian signified "bread"; and that the Egyptians, convinced by this experiment, admitted that the Phrygians were more ancient than themselves. Again, a preference in point of antiquity has also been given to the Chinese. It has been urged that the Chinese are the posterity of Noah, and that Fohi, the first king of China, was Noah himself. Mr. Webb, an ingenious writer in the reign of Charles II, strenuously maintains that the Chinese is the only original language, and that it was spoken in Paradise. Its antiquity is said to be strengthened by its singularity, consisting, as it does, of few words, all monosyllables, and from its simplicity of construction, having no variety of declensions, conjugations, or grammatical rules.

Celtic scholars assert their language to be the most ancient.‡

* *Le Monde primitif analysé et comparé avec le monde moderne.* Paris: 1773; containing etymological vocabularies of the Latin and French languages.

† "Ευτεπνή."

‡ Cleland has a partiality for the Celtic. Cf. Fauchet, *Antiquités Gauloises*; Bacon, *Recherches sur les origines Celtiques*; Le Brigant, *Éléments de la langue des Celtes*; Frappault, *Celt-hellenisme*.

Pezron* and Bullet† have discovered in the Bas Breton the root of all languages. Dr. Armstrong has gone so far as to show Celtic words in the names of places in the New World; leaving us to infer thereby that the Celts had discovered America before the time of Columbus. According to Goropius,‡ the Low Dutch was the language of Paradise. Chardin tells us the Persians believe three languages to have been spoken in Paradise; Arabic by the serpent, Persian by Adam, and Turkish by Gabriel. André Kempe says God spoke to Adam in Swedish, Adam answered in Danish, and the serpent spoke to Eve in French.§ Erro|| claims Basque as the language spoken by Adam. If we are to believe some writers, the Iberians were the fathers of the human race; and the Basque was not only the original language of Spain, but the primæval language, and that from it all languages have been derived. Their grammarians tell us that it existed before the Tower of Babel, and was brought into Spain by Tubal himself. Perhaps of all writers upon this subject, Larramendi has furnished us with the largest amount of trash. This truth-hating scholiast, in the preface to his *Diccionario Trilingue del Castellano, Bascuence y Latin*,¶ asserts that of all languages the Basque is the most perfect, the most harmonious, the most copious and rich, the most eloquent, the most easy, and the most pleasing in the variety of its dialects; that it cannot be traced to any Oriental language; and that it is not only a primitive language, but *the* primitive language. He states that 1,951 Basque words are found in the Spanish, and that the Greek, Latin, Italian, and French, have derived many words from it. According to D'Abbadie,** “La langue euskarienne date des premiers siècles de notre temps historique; elle naquit durant le premier âge, dans le midi; sa vocalization vierge est divine, sa nomenclature est originale et sans mélange; l'architecture merveilleusement régulière et simple de son système grammatical achève d'en faire le dialecte le plus philosophique, le plus complet du verbe humain. Conservée jusqu'au milieu de l'âge ancien, par les Apothomites, les Anherrites, les Churites, les Muthugores et autres peuplades de la

* Pezron, *Antiquité de la langue Celtique*.

† Bullet, *Mémoire sur la langue Celtique*.

‡ *Hermathena Joannis Goropii Becani*, Antwerpæ, 1580. *Origines*, Antverpianæ, 1569.

§ On the Language of Paradise. Cf. Max Müller, p. 131.

|| *El Mundo primitivo filosofico de la Antiquedad y Cultura de la Nacion Bascongada*, by J. B. Erro. Madrid: 1815.

¶ *San Sebastian*, 1745.

** *Etudes grammaticales sur la langue Euskarienne*, par A. Th. d'Abbadie et J. Augustin Chabo. Paris: 1836. Première partie, p. 3.

Mauritanie primitive, cette langue fleurit en Espagne pendant trois milles ans, avec les Ibères-Euskariens,* jusqu'à l'invasion des Celtes ou Tartares, dont les dialectes grossiers et ténébreux enfantèrent dans nos contrées méridionales la confusion de *Babel*. Il est donc vrai de dire, en allégorie, que la langue *Eskuera*, bien antérieure à l'établissement des barbares dans le midi, tire son origine d'*Adam*; puisque ce mythe génésique représente l'humanité des premiers âges." Again, another writer† contends that as the uncultivated populations of the two Americas could not have sprung from the ground like mushrooms, they must have emigrated from Asia, and the period of their emigration was unknown until recently. He recommends to notice a book written by Ethan Smith, a pastor in Poultney in the United States, entitled *View of the Hebrews*, etc., and comprehending accounts of various English, French, Spanish, and Portuguese tourists, who had made diligent inquiries relative to the aborigines. He says they agree in their accounts as to the primitive settlers of America, that they were all of one stock, viz., of the *ten tribes of Israel*, "who were carried away by the Assyrian kings to Halah and Habor, the river Gozen (or Ganges), and the cities of Media"; who in a short time, making their way towards the east of Asia, crossed the ice of Behring's Straits, and in time multiplied and extended themselves all over America from north to south. That although the primitive discoverers of America declared the natives to be savages, because they did not possess letters, and were treated as such by the European savages who conquered them, yet modern tourists find them (by the traditions preserved among the natives) to possess religious principles, sentiments, customs and manners, far surpassing our opinions regarding them; all which afford testimony to their having been once of the patriarchal seed of Israel. Quoting from the same work, he says, "they all inform us, agreeably to their traditions, that their primitive parent had twelve sons, of whose descendants they are a portion; that their forefathers, having transgressed against God, were made captives, and carried off far from their own country; that 2,500 years ago their ancestors left the country of their captivity, proceeded towards the east, crossed a river of hardened water, and settled themselves in America. Regarding their religion, they acknowledge a supreme power; they have priests, and some sort of sacrifices; they believe in a future state, and in rewards and punishments; and it is asserted

* Voyage en Navarre pendant l'insurrection des Basques, 1830-1835.

† See Theological and Critical Treatise on the Primogeniture of the Holy Language, by Solomon Bennett. London: 1835. Note, p. 8.

that they use in their prayers many sacred terms with very little deviation in dialect from the original Hebrew; as *Yohewah*, '*Ale* and *Aleim*'; *Yah*, *Halleluwah*; in their political language, *shemin*, 'heaven'; *Shilu*, 'Shiloh'; *abba*, 'father'; *ish* or *ishte*, 'a man'; *ishto*, 'a woman'; *Awah*, 'Eve'; *liani*, 'a wife or concubine'; *nichiri*, 'nostrils'; *kora*, 'cold'; *Canaai*, 'Canaan'; *Ararat*, 'high mountain', etc."

Professor Müller devotes considerable space to the discovery of Sanskrit, its development in Europe, its philology, and its affinity with Greek and Latin. It is a singular circumstance that this, the most perfect of all known languages, should have been scarcely known to us before the close of the last century. It was about this epoch that it received a powerful impulse, principally from the necessities of our own government in India. The way was first opened in India by Anquetil Duperron, who was soon followed by Sir Wm. Jones, Colebrooke, Wilkins, Prinsep, and Wilson, author of the celebrated Sanskrit dictionary. In England, the study of this language is chiefly indebted to Haughton; in France,* to Chézy and Eugène Burnouf. In Germany it of course obtained a most cordial reception, its study being principally made known by A. W. von Schlegel, G. von Humboldt, Bopp, Rosen, and Lassen. Von Schlegel and Lassen subsequently founded a Sanskrit school, having for its object not only a well grounded and complete knowledge of the language, but also of the literature and antiquities of India;† and at the present day there are few continental universities where there is not a professor of Sanskrit. It was, indeed, the introduction of Sanskrit to the learned of Europe that gave rise to "Comparative Philology". For this new science we are chiefly indebted to the labours of Bopp, Pott, Grimm, Schlegel, Pictet, Eichhoff, and Vans Kennedy, whose able work on the affinities of languages contains a comparative table of upwards of nine hundred words in Sanskrit, English, Anglo-Saxon, German, Latin, Greek, and Persian. I am, however, disposed to think that many of the words given by these writers as derivatives of Sanskrit are very doubtful; and I could name many that have been omitted.

Considering the interest that the subject has of late awakened, it may not be here thought out of the way to adduce some of the statistics that I have been able to gather on the Sanskrit element to be found in the Old World languages. Upwards of 900 Sanskrit roots have been discovered in the Greek, Latin, Persian, and Gotho-Teu-

* Where it was chiefly introduced through Hamilton in 1804.

† Cf. P. Cyc.; Encyc. des Gens du Monde.

tonic languages. Of these, 263 are found in Persian; 43 in German and not in English, 132 in English and not in German, whilst 119 are common to both English and German. There are 208 in Greek and not in Latin, 188 in Latin and not in Greek, and 131 are common to both Latin and Greek; whilst 31 words are common to all these languages. There are, of course, many Sanskrit roots in the Celtic and Slavonic languages; but the number has not, as far as I am aware, been ascertained. Indeed the Sanskrit roots in some Slavonic dialects probably exceed those in any European language. The Gypsy language, which is of Hindústáni origin, possesses a large number of Sanskrit roots;* and the attempt to show a connexion between the Gypsy and Slavonic languages proves rather that analogous words have been derived from a common root—the Sanskrit. In the Siamese, or language of Thai, the Peguan, the Avanesse, the Malayálam, Telugu, Karnáta, and Tamil, are found many Sanskrit words. The Malay has 516; the Javanese still more; the Zend has 53, the Cingalese, which is spoken in a great part of Ceylon, has many from the same source. Indeed, not only are most of the proper names in this island mentioned by Ptolemy, but most of the river names found on modern maps may be traced to the Sanskrit. On the other hand, what are termed the Semitic languages, as the Hebrew, Arabic, Syriac, Ethiopic, and Amharic; the Bugis, or language of the Celebes,† the Turkish, the Egyptian dialects, and the Chinese, contain very few words of Sanskrit origin; and the Armenian has probably none which have not crept in through the Greek; and, notwithstanding all that has been advanced to the contrary, I am disposed to think that the Basque does not contain any Sanskrit words which have not been derived through the Greek or Latin. And now with respect to the two hundred and fifty-one Sanskrit roots which have found their way, directly or indirectly, through Greek, Latin, Anglo-Saxon, etc., into the English language. Some of these Sanskrit words are represented by only one English word; whilst others may be discovered in composition of from two words to four thousand words; and if a proper calculation were made, I am disposed to think that these two hundred and fifty-one Sanskrit roots would be found to form part of thirty thousand English words.‡

* Cf. *Histoire des Bohémiens*, par H. M. G. Grellmann, 8vo, Paris, 1810; also Adelung's *Mithridates* (Vater), Berlin, 1817, iv, 82-86, which contains a comparative vocabulary of a great many Slavonic and Gypsy words.

† The Bugis has many words from Malay, Tagalish, and Javanese.

‡ As a sample of the fecundity of one Sanskrit word, Professor Müller gives the root *pa's* (with the *s* found in *spa'sa*, a spy), from which he derives, indirectly, the following:—aspect, auspicious, circumspect, conspicuous, expect, inspect, inspection, prospect, prospective, respective, respectable, respite, special,

Indeed to such an extent is the English language impregnated with Sanskrit and Hebrew, that we can scarcely utter a sentence which does contain one or more words derived from one or both of those languages. Professor Müller makes the Celtic a branch of what he designates the Aryan family. He says, "Celtic words may be found in German, Slavonic, and even in Latin, but only as foreign terms, and their amount is much smaller than is commonly supposed. A far larger number of Latin and German words have since found their way into the modern Celtic dialects, and these have frequently been mistaken by Celtic enthusiasts for original words, from which German and Latin might, in their turn, be derived." In these remarks I entirely coincide. It has indeed often occurred to my mind that the attempt of Celtic scholars to trace, by implication, the Latin, Greek, and other languages to the Celtic, is puerile in the extreme. After a comparison of the Celtic dialects with the Greek, Latin, and derivative languages, the Gotho-Teutonic languages, and the Sanskrit, my own impression is that one-half of the words now found in Gaelic, Erse, Manx, Welsh, Cornish and Bas Breton owe their origin to the modern European languages, and that two-thirds of the remaining moiety may be traced to Greek and Latin. With regard to the Celtic element in English, urged with so much assurance by some writers, I do not believe that in the whole body of the language there will be found thirty Celtic words; which is above the number that exists in Latin and Greek. On Ethnology, Professor Müller says, "The science of language and the science of ethnology have both suffered most seriously from being mixed up together. The classification of races and languages should be quite independent of each other. Races may change their languages, and history supplies us with several instances where one race adopted the language of another. Different languages therefore may be spoken by one race, or the same language may be spoken by different races; so that any attempt at squaring the classification of races and tongues must necessarily fail." This is quite true. Instance the French, a nation chiefly of Celtic origin, whose native tongue has been replaced by the Latin; for what is the French language of the present day but one in which sixteen out of every twenty words have been corrupted from Latin? Again, in Cornwall, the ancient language, a sister dialect of the Welsh, has

specialty, species, specific, specimen, specious, spectacles, spectator, spectrum, speculate, speculative, spices, spicy, spite, spiteful, spy, suspect, suspicious; and I may add, among others, despection, despicable, despise, disrespect, episcopal, inauspicious, retrospect, retrospective, and spectre.

been long since superseded by the English ; whilst in the Highlands of Scotland, where are to be found some of the purest remains of the Celtic, the English language bids fair to become the national one. The fate of language, when spoken by those subjected to foreigners of another tongue, will be seen by the following extract from Niebuhr, "Many people living under the dominion of the Arabians and Turks have lost the use of their mother tongue. The Greeks and Armenians settled in Egypt and Syria, speak Arabic ; and the services of their public worship are performed in two languages at once. In Natolia these nations speak their own languages in several different dialects. The Turkish officers sometimes extend their despotism to the language of their subjects. A Pacha of Kaysar, who could not endure to hear the Greek language spoken, forbade the Greeks in his pachalic, under pain of death, to use any language but the Turkish. Since that prohibition was issued, the Christians of Kaysar and Angora have continued to speak the Turkish, and at present do not well understand their original language." That some remains of another language may, however, survive the general wreck in different places, will be seen by the following passage from the same author. "In Syria and Palestine, indeed, no language is to be heard but the Arabic ; and yet the Syriac is not absolutely a dead language, but is still spoken in several villages in the pachalic of Damascus. In many places, in the neighbourhood of Merdin and Mosul, the Christians still speak in the Chaldean language ; and the inhabitants of the villages, who do not frequent towns, never hear any other than their mother tongue. The Christians born in the cities of Merdin and Mosul, although they speak Arabic, write in the Chaldean characters, just as the Maronites write their Arabic in Syriac letters, and the Greeks write their Turkish in Greek letters." *

A few words on the use of the terms Semitic, Japhetic, and Caucasian, still used by some authors. The descendants of Shem and Ham, the youngest sons of Noah, are said to have peopled all the great plain situated north and west of the Persian Gulf, between that Gulf and the Indian Ocean on the east, and the Arabian Gulf and the Mediterranean on the west, with the northern coast of Africa ; comprehending Assyria, Chaldea, Syria, Palestine, Arabia, Egypt, and Lybia, and the principal languages and dialects used by these descendants, known to us under the name of Chaldee or Aramean, Syriac, Hebrew, old Phœnician, Arabic, Ethiopic, Samaritan, and Coptic

* See Niebuhr, vol. ii, p. 259, etc. ; also Calmet, *Dict. Bib.*, by Taylor. London : 1832.

have been accordingly styled Semitic or Shemitic. The descendants of Japhet, the eldest son of Noah, are said to have peopled Asia Minor, the northern parts of Asia, about the Euxine and Caspian, and all Europe; hence the term Japhetic has been applied to the languages spoken by these peoples, in contradistinction to Shemitic. The term Japhetic will, therefore, include not only the Celtic, German, and the Greek, Latin, and derivative languages, but likewise all Asiatic languages not comprised under the term Shemitic. We next come to the term Caucasian. The name Caucasus is applied to a chain of mountains in Asia, extending from the borders of the Euxine to the shores of the Caspian, through a space of about 400 miles, and forming an almost impassable barrier between Russia, Persia, and Turkey. Blumenbach* makes the tribes inhabiting this tract of country the basis of one of the five primary classes into which he divides the whole human race; and the term Caucasian has been also applied (in lieu of Japhetic) to the languages spoken by all races of Caucasian origin. The term Caucasian has been, to some extent, replaced by Indo-Germanic and Indo-European. Max Müller substitutes for the last two names, the technical term Aryan. Speaking of the sixteen countries mentioned in the *Zend-avesta*, he says, "The first of these countries is called *Airyanem Vaejô*, 'the Aryan seed,' and its position must have been as far east as the western slopes of the Belurtag and Mustag, near the sources of the Oxus and Yaxartes. From this country, which is called their seed, the Aryans advanced towards the south and west, and in the *Zend-avesta* the whole extent of country occupied by the Aryans is likewise called Airyâ. A line drawn from India along the Paropamisus and Caucasus Indicus in the east, following in the north the direction between the Oxus and Yaxartes, then remaining along the Caspian Sea, so as to include Hyrcania and Râgha, then turning south-east on the borders of Nisaca, Aria (*i.e.* Haria), and the countries washed by the Etymandrus and Arachotus, would indicate the general horizon of the Zoroastrian world. Greek geographers use the name of Ariana in a wider sense even than the *Zend-avesta*. All the country between the Indian Ocean in the south, and the Indus in the east, the Hindoo Kush and Paropamisus in the north, the Caspian gates, Karamania, and the mouth of the Persian gulf in the west, is included by Strabo (xv, 2.) under the name of Ariana; and Bactria is thus called by him 'the ornament of the whole of Ariana.'" I am inclined to think that the term Aryan will not be accepted as satisfactory, the area above given being peopled by nations

* De Generis Humani Varietate Nativâ Dissertatio.

whose languages can hardly be classed in the same family. I think it will be admitted that although Bengálí, Uriya, Maráthí, Hindí, Guzaráthí and Persian may be classed under the Aryan group; on the other hand, Karnáta, Telugu, Tamil, and Malayálam should be placed under what Professor Müller designates the Turanian family. The chapter on the Turanian family, and especially on the Turkish branch, will deserve a careful study. Max Müller derives the word Turanian from Tura (implying the swiftness of the horseman), the original name of the Turanians. He applies the term to the nomadic races of Asia, as opposed to the agricultural or Aryan races, and likewise to all languages spoken in Asia and Europe not included under the Aryan and Semitic families, except the Chinese and its cognate languages and dialects, as, for instance, the Japanese and Anamitic. The characteristic feature of the Turanian family is what has been termed agglutination or gluing together. "This means not only that, in their grammar, pronouns are *glued* to the verbs in order to form the conjugation, or prepositions to substantives in order to form declension. That would not be a distinguishing characteristic of the Turanian or Nomad languages; for in Hebrew as well as in Sanskrit, conjugation and declension were originally formed on the same principle. What distinguishes the Turanian languages is that in them the conjugation and declension can still be taken to pieces; and although the terminations have by no means always retained their significative power as independent words, they are felt as modificatory syllables and as distinct from the roots to which they are appended. In the Aryan languages the modifications of words, comprised under declension and conjugation, were likewise originally expressed by agglutination; but the component parts began soon to coalesce, so as to form one integral word, liable in its turn to phonetic corruption to such an extent that it became impossible after a time to decide which was the root, and which the modificatory element. The difference between an Aryan and a Turanian language is somewhat the same as between good and bad mosaic. The Aryan words seem made of one piece; the Turanian words clearly show the sutures and fissures where the small stones are cemented together." As an instance of this agglutination, Professor Müller takes the Turkish verb *sevmek*, "to love," in its present tense, the root of which is *sev*, the termination *mek* or *mak* being merely used to form infinitives. "The root *sev*, to love, in the most general sense of the word, or love as a root, but expressing only the general idea of loving in the abstract, but which root can never be touched. Whatever syllables may be added for the modification of its

meaning, it must never be changed or broken, assimilated, or modified, as in the English I fall, I *fell*, I take, I *took*, I think, I *thought*, and similar forms. In Turkish, one participle is formed by adding *er* : thus *sever* will mean lov-er or lov-ing. We now get *sever* as forming the first two syllables of the verb in all its inflections in the present." The Turkish pronouns are *ben*, I; *sen*, thou; *öl* or *o*, he; *biz*, we; *siz*, you; *ânlar*, they. The present of the indicative is : *sev-er-im*, I love; *sever-er-sen*, thou lovest; *sev-er*, he loves; *sev-er-iz*, we love; *sev-er-siz*, you love; *sev-er-ler*, they love. From this it will be seen that in the second person singular and plural the pronoun is preserved intact; in the first person singular it takes the form of *im*; in the third person it is dropped altogether; in the first person plural *biz* becomes *iz*, whilst in the third person plural, *ânlar* is corrupted down to *ler*;* but that notwithstanding this the root *sev* is always preserved. It may be here observed that agglutinative languages are not peculiar to Asia, nor to written languages. The Hottentot family of languages, and some of the American Indian languages, are exceedingly rich in words formed by agglutination. Professor Müller has little faith in the onomatopoeic and interjectional theories (which he respectively designates the *Bow-wow theory*, and the *Pook-pook theory*), the former of which was at first defended by Herder† and the latter by Condillac and others. He says, "Though there are names in every language formed by imitation of sound, yet these constitute a very small proportion of our dictionary. They are playthings, not the tools of language, and any attempt to reduce the most common and necessary words to imitative sounds ends in complete failure." "We cannot deny the possibility that a language might be formed on the principle of imitation: all we say is, that as yet no language has been discovered that was so formed. An Englishman in China, seeing a dish placed before him about which he felt suspicious, and wishing to know whether it was a duck, said, with an interrogative accent, "Quack, quack?" He received the clear and straightforward answer "Bow-wow!" This no doubt was as good as the most eloquent conversation on the same subject between an Englishman and a French waiter; but I doubt whether it deserves the name of language. We do not speak of a *bow-wow*, but of a dog. We speak of a cow, not of a *mow*; of a lamb, not of a *baa*. It is the same in more

* The defective verb *im*, I am, comes even nearer to the termination of the present of the indicative. It runs thus, *im*, *im*, or *in*, I am; *sen*, thou art; *dur*, he is; *iz* or *iz*, we are; *siz* or *sîiz*, you are; *durler*, *lerdur*, or *ânlardur*, they are.

† Cf. Steinthal's *Der Ursprung der Sprache*, Berlin, 1859.

ancient languages, such as Greek, Latin, and Sanskrit. If this principle of onomatopoeia is applicable anywhere, it would be in the formation of the names of animals; yet we listen in vain for any similarity between goose and cackling, duck and quacking, sparrow and chirping, hog and grunting, cat and mewling, between dog and barking, yelping, snarling, or growling. There are of course some names, such as *cuckoo*,* which are clearly formed by an imitation of sound. But words of this kind are, like artificial flowers, without a root. They are sterile, and are unfit to express any thing beyond the one object which they imitate. If you remember the variety of derivatives that could be formed from the root *spac*, to see, you will at once perceive the difference between the fabrication of such a word as *cuckoo*, and the true natural growth of words." "Most of these onomatopoeias vanish as soon as we trace our own names back to Anglo-Saxon and Gothic, or compare them with their cognates in Greek, Latin, or Sanskrit. The number of names which are really formed by an imitation of sound dwindle down to a very small quatum if cross-examined by the comparative philologist; and we are left in the end with the conviction that though a language might have been made of the roaring, fizzing, hissing, twittering, cracking, banging, stammering, and rattling sounds of nature, the tongues with which we are acquainted point to a different origin. I am inclined to think Professor Müller has greatly underrated the onomatopoeic theory, and that all languages have derived a great many words in this way. If the English language be taken as a sample, the words derived (directly or indirectly) by imitation of sound will be found to form a large proportion of the words from which the whole language has been built up. I give the following list, which might be added to very considerably. Thus, bang, bark, baste, batter (to), bawl, bay, beat, beef,† blare, blast, blaze, bleat, blow, boil, bomb, bovine, bray, broil, brush, bubble, bucolic, bump, burn, burst, buss, buzz, cackle, cat (to), caw, chatter, chew, chirp, chough, clip, cluck, coo, cook, cough, crack, crake,‡ crash and crush, creak, croak, crow, cuckoo, cut, daddy, dash, din, dip, drain, dribble, drill, drink,§ drub, drum, echo, father,|| fire (to), fizz and fizzle, flap, flash, flicker, flitter, flutter, fly, gabber, gargle, gash, giggle, gnash, gnaw, gobble, grill, grind, groan, growl, grunt, gulp, gurgle, gush, hammer, hiccup,

* Cf. crake, crow, rail.

† Evidently from *Boos*, *Bovs*, from the sound made by the animal. *Boos*, *bos*, *bovis*, *bœuf*, *beef*. Cf. *bovine*, *bucolic*.

‡ The bird so named.

§ From the trinking of the glasses whilst toasting each other.

|| Indirectly.

hiss, hist, hoop or whoop, howl, hush, jerk, jump, knock, laughter, lick, low (to), lump, mamma, mash, mew, mewl and miaul, moan, mother,* mumble, murmur, mutter, neigh, palpitate, pant, papa, pat, paternal,* patter, peal (to), piddle, pewit, pour, puff, pump, push, quack, quash or squash, rail,† rain, rap, rend, ring, rinse, ripple, roar, roll (to), rub, ruffle, rumble, rush, saw, scrape, scream, seethe, shears, shoot, shout, shuffle, shut, sick, sigh, simmer, sing, skim, slam, slap, slash, slide, slip, slit, smack, smash, snarl, sneeze, snivel, snore, snort, sob, sound, spatter, spew, spill, spit, splash, split, sputter, squall, squeak, squeeze, squirt, stammer, stamp, strike, stutter, stun, surge, tear (to), thrash, throb, thump, tick and ticket, titter, tone, tramp, trickle, tug, tuck, tush, twaddle, twitter, whack, whap or whop, whine, whip, whirl, world, whisper, whiz, yelp.‡

I agree in the main with Professor Müller's etymologies; but must take the liberty of excepting to some of them, as of the words *Erin*, *Welsh*, *feeble*, *friend*, *soul*, *sea*. I shall, however, for want of space, be compelled, for the present, to postpone what I have to say upon this subject. Professor Müller is of opinion that grammar is the criterion of language. He says, "Hervas was told by missionaries that in the middle of the eighteenth century the Araucans used hardly a word which was not Spanish, though they preserved both the grammar and the syntax of their own native speech. This is the reason why grammar is made the criterion of the relationship and the base of the classification in almost all languages; and it follows, therefore, as a matter of course, that in the classification and in the science of language, it is impossible to admit the existence of a mixed idiom." . . . "It is as impossible to derive Latin from Greek, or Greek from Sanskrit, as it is to treat French as a modification of Provençal. The same auxiliary verb can be made to furnish sufficient proof that Latin never could have passed through the Greek, or what used to be called the Pelasgic stage; but that both are independent modifications of the same original language." Again, "the only remark which the comparative philologist has to make is, that the idea of making Greek the parent of Latin is more preposterous than deriving English from German; the fact being that there are many forms in Latin more primitive than their corresponding forms in Greek." No doubt, if grammar is to be considered as the only criterion of language, that the Latin could hardly have been derived from the Greek; at the same time, if both these languages are compared with the Sanskrit—and for this purpose we need

* Indirectly.

+ The bird so named.

‡ See also *Dictionnaire raisonné des onomatopées*, par Ch. Nodier, 2nd ed. 1828.

only compare the present tense of the verb “to be”, the crude form of which is *as* or *es*, with the Greek, Latin, old Slavonic, and Gothic—there can be little doubt that the grammar of each has been derived from the Sanskrit. There are, doubtless, some forms in Latin more primitive than their corresponding forms in Greek, and others which come nearer to the Sanskrit than do the Greek; nevertheless, it cannot be denied that the Latin is indebted to the Greek for very many words. We must not be guided by a cursory glance at our Latin dictionaries, containing at least 40,000 words, in order to arrive at a proper conclusion with regard to the number of words which the Latin has borrowed from the Greek. If these are carefully examined, it will be evident that the Latin language has been built up from a very few words indeed. Mr. Hall* reduced it to 1,321 root words; but even many of these will be found to be compounds, and may probably be brought down to 900 or 1000; and I do not hesitate to assert, notwithstanding all that has been stated by some able philologists to the contrary, that more than one-half of these have been derived from the Greek.†

One of the most interesting chapters of the work is that on the origin of grammatical forms. It has hitherto seemed to most minds that any attempt to discover the origin of the different inflections would prove hopeless. To be sure, Bellot and others have endeavoured to account for some terminations, but with little success. Professor Müller has led the way to the discovery of this very curious riddle in the science of language. For instance, he considers the termination *bo* in *amabo* is the old auxiliary *bhú*, to become (a word, by the by, from Sanscrit, *bhu*, to be), and that *ow* as the termination of the Greek future, is the old auxiliary, *as*, to be (the final letter being, of course, the only etymological part of the word). Again, he shows clearly that the final letter in the preterite *loved* is the auxiliary verb *to do*, and that I *loved* is the same as I *love did*, or I *did love*. This he proves by a comparison with the Gothic and Anglo-Saxon. Thus the preterite singular of the Gothic *nasjan*, to flourish, which is *nas-i-da*, *nas-i-dés*, *nas-i-da*, becomes, in Anglo-Saxon *ner-ë-de*, *ner-ë-dest*, *ner-ë-de*. The auxiliary verb *to do*, in Anglo-Saxon, is in the singular *dide*, *didest*, *dide*. If, says he, we had only the Anglo-Saxon

* Principal Roots of the Latin Language. London: 1825.

Root substantives	-	-	-	-	657
„ adjectives	-	-	-	-	252
„ verbs	-	-	-	-	412

1321

† In order not to exceed the required limits, the vocabulary of these words has been reluctantly omitted. It shall, however, be given in some future paper.

preterite *nerēde*, and the Anglo-Saxon *dide*, the identity of the *de* in *nerēde* with *dide* would not be very apparent. In the Gothic singular *nasida*, *nasidēs*, *nasida* stand for *nasidedu*, *nasidedēs*, *nasideda*. The same contraction has taken place in Anglo-Saxon, not only in the singular, but in the plural; yet such is the similarity between Gothic and Anglo-Saxon, that we cannot doubt that their preterites have been formed on the same last; and if there is any truth in inductive reasoning, there must have been an original Anglo-Saxon preterite *ner-ē-dide*, *ner-ē-didest*, *ner-ē-dide*; and as *ner-ē-dide* dwindled down to *nerēde*, so *nerēde* would, in modern English, become *nered*, and therefore the *d* of the preterite I *loved* was originally the auxiliary verb to *do*. Further, "it might be asked, however, very properly, how *did* itself, or the Anglo-Saxon *dide*, was formed, and how it received the meaning of a preterite? In *dide* the final *de* is not termination, but it is the root, and the first syllable *di* is a reduplication of the root; the fact being that all preterites of old, or, as they are called, strong verbs, were formed, as in Greek and Sanskrit, by means of reduplication; reduplication being one of the principal means by which roots were invested with a verbal character. The root *do*, in Anglo-Saxon, is the same as the root *θη* in *τιθημι*, and the Sanskrit *dhā* in *dadhāmi*. Anglo-Saxon *dide* would, therefore, correspond to Sanskrit *dahhau*, I placed." Further, he shows that the Romance future was formed on a totally different principle to the Latin future in *bo*, the former being originally a compound of the auxiliary verb to *have*, with an infinitive; and that in French I *have to say* (*je-dir-ai*), easily took the meaning, I *shall say*. Again, Professor Müller proves that the final syllable *bam* in *catabam* (whence *ba* in Spanish *cantaba*, and *va* in Italian *cantava*), was originally an independent auxiliary verb, the same which exists in Sanskrit *bhavāmi*, and in Anglo-Saxon *beom*, I am. He also accounts for adjectival forms; but the subject, although exceedingly interesting, is not within our present limits.

In the chapter on "Dialectic Regeneration" Professor Müller says, "Dialects have always been the feeders rather than the channels of a literary language; anyhow, they are parallel streams which existed long before one of them was raised to that temporary eminence which is the result of literary cultivation. . . . Before there is a national language, there have always been hundreds of dialects in districts, towns, villages, clans, and families.* That a language may

* Those who assert that languages were originally formed from dialects, go far to disprove the common origin of languages.

be made up of many others we need only name the English, which although principally based upon Latin and Saxon, is a *mélange* of upwards of fifty languages. That a dialect, and even a branch of a dialect, may itself become a language, is proved by the different dialects of the Greek, as the Eolic, Doric, Attic, and Ionic, which in later times were justly entitled to the appellation of languages. Again, the Polish and Russian, which, although at first merely dialects of the Slavonic, are now entitled to rank as languages. On the other hand, it would be absurd to say that the most ancient languages had their origin in dialects. It is quite the reverse. What is the meaning of the word dialect? A dialect is "the branch of a parent language, with such alterations as time, accident, and local alterations have occasioned." Dialect is indeed to the principal language what variety is to species. Grimm* says "Dialects develop themselves progressively, and the more we look backward in the history of language the smaller is their number, the less definite are their features. All multiplicity arises gradually from an original unity." On the other hand, Max Müller tells us that the progress of civilization and centralization tends to reduce the number of dialects, and to soften their features. This is strengthened by some facts which Professor Müller himself gives incidentally. He says, "We are told by Pliny that in Colchis there were more than three hundred tribes speaking different dialects; and that the Romans, in order to carry on any intercourse with the natives, had to employ one hundred and thirty interpreters. This is probably an exaggeration, but we have no reason to doubt the statement of Strabo, who speaks of seventy tribes living together in that country which, even now, is called 'the mountain of languages.'" Whatever may have been the tendency in the early ages of the world, there can be no doubt that in modern times dialects have not increased in number, but rather the reverse. The greater the intercommunication between the peoples of the earth the fewer will be the number of dialects. Dialects of neighbouring peoples will coalesce, whilst dialects in general will give place to the more polished language.†

Professor Müller gives some account of the principal European languages, but says nothing in relation to the Basque; and perhaps I

* *Geschichte der Deutschen Sprache*, s. 833; Max Müller, p. 51.

† There never has existed a country so vast, and a population so large as that of the United States, with so little variety of dialect, which is owing to the quick and constant communication between the different parts of the country, and the roving spirit of the people, the great mass of whom, besides, derive their descent from the same stock.—*Encyc. Amer.* (Lieber); *Phil.*, 1830, in voc. "Dialect."

have scarcely room here to enter much on the subject. In addition to what I have already said, I will simply remark, first, that the Basque cannot be classed among the Celtic languages, and that it contains very few Celtic roots; secondly, that if compared with the Finnish, Lapponic, Hungarian, and Georgian languages, it will be found to belong to the Tatar family; thirdly, that it has no words direct from the Sanskrit; and that any Sanskrit roots that it possesses have crept in through the Greek, Latin, or derivative languages; fourthly, that it has one affinity with the Scandinavian languages, in the postponement of the definite article; and fifthly and lastly, that, if compared with the Greek and Latin, it will be found to have borrowed a very large number of words from those languages.*

And now with regard to the common origin of languages. Grotius is of opinion that though the primitive language of mankind nowhere exists in its original form, that nevertheless traces of it may be found in all the languages now spoken; a bold assertion for any one to make; for what linguist ever did or ever could compare all the languages of the globe, so as to have the means of ascertaining whether they contain traces of a primitive idiom. Professor Müller argues only for the *possibility*, not for the *probability*, of a common origin. He says nothing necessitates the admission of different independent beginnings for the *material* and *formal* elements of the Turanian, Semitic, and Aryan branches of speech; and that it is possible even now to point out radicals which, under various changes and disguises, have been current in these three branches ever since their first separation. In reference to this, I would ask when the separation (if any) took place, and what evidence we possess on the subject? It would seem that the mention of the word "separation" in this place is assuming the whole question. I would ask, moreover, what are the radicals in the three branches of language which have been current since such separation: and is it not more than probable that they are accidental? Professor Müller admits that it is impossible to derive the Aryan system of grammar from the Semitic, or *vice versâ*; yet he perfectly understands how, either through individual influences, or by the wear and tear of speech in its own continuous working, the different systems of Asia and Europe

* Azaïs derives the Basque from the Hebrew, through the Carthaginian, Phœnician, and Syriac! Dr. Webster says the Basque or Cantabrian in Spain, the Gaelic in the north of Scotland, and the Hiberno-Celtic, or native language of Ireland, are the purest remains of the ancient Celtic! This only shows that Dr. Webster cannot have looked into the Basque. If he had done so, it may be doubted whether he would have been able to discover twelve Celtic words.

may have been produced. I cannot see it myself. The differences between these three branches, and between them and other languages, have continued so long that we can hardly suppose them to have had a common origin. Let us take, for example, two of the most ancient languages, the Chinese and the Sanskrit. These two languages, or as the latter is not now spoken, the languages derived therefrom, have been proved to have existed at least 4000 years; the one monosyllabic and atactic, the other polysyllabic and syntactic.* It does not appear that during this period they have at all approached nearer to each other, and, in their general structure and character they remain the same; and if such be the case, are we to assume that prior to the time to which we are enabled to trace them, language could have undergone so many changes in its organic structure as to have produced the different systems of Asia and Europe. But if we are to take the vulgar theory of the age of the world—say 6000 years—to be the correct one, the thing is still more improbable; for if there has been no material change in these two languages during the last 4000 years, on what ground are we to presume that some violent change should have taken place within the previous 2000 years. The same remarks might be made on other languages, as the Hebrew and kindred languages; the Basque, the Greek, and the Slavonic languages. The Tatar conquest made no alteration in the structure of the Chinese idiom; nor has the Basque lost its grammatical forms, notwithstanding that the people of this part of Spain have been for ages surrounded by nations speaking languages whose idioms are entirely opposite.†

Max Müller makes no mention of the African and American languages, or the Polynesian and Australian dialects, which, we shall hereafter see, amount in number to nearly all the languages of the globe put together. All these languages and dialects are more or less ancient, and some of them may be traced, it is said, as far back

* It is a remarkable fact that in Japan two languages exist at the same time; the one monosyllabic and atactic, like the Chinese; the other polysyllabic, with numerous inflexions and grammatical forms. The former is called the *Koye*; the latter the *Yomi*. Both are in use at the same time, and occasionally intermix with each other, still preserving their general character and peculiar structure. See *Elémens de la Grammaire Japonaise*, par le P. Rodriguez, traduits du Portugais, par M. C. Landusse, Paris, 1825; and *Encyc. Amer.* (Lieber); *Phil.*, 1832, in voc. "Philology".

† Cf. Partington, *Brit. Cyc.* Between the Chinese and the Cherokee it would be difficult to find the least etymological affinity; and if the distance of places is assigned as the cause, we will instance the Bengáli, a language spoken in a country not far from China, and which differs from the Chinese full as much as Mohawk from Potawatamce; *ib.*

as the Chinese and Sanskrit; and yet their organic differences have remained the same for ages. We find in them idioms of different structure, having characters of their own, of which it would be in vain to seek for traces in a primitive tongue.* Independently, however, of grammar, a comparison of words should be made. That the European and Asiatic languages have many words in common there can be no doubt. On the other hand, some of the most ordinary words are totally dissimilar in very many languages; and I am disposed to think, that taking into account phonetic decay, wear and tear of words, and other causes, there remains scarcely any possibility of their having had a common origin. I will merely give a few of such words, reserving for a future paper to extend the list. The word *gold*, which in the Gotho-Teutonic languages is found written *gull*, *guld*, and *goud*, and in the Tatar *goltz*, can have no etymological connection with Latin *aurum* (whence Spanish and Italian *oro*, French *or*, Gaelic *òir*); nor with Polish *zloto*, Greek *χρυσος*, Sanskrit *kāñākā*, Arabic *zahab*, Persian *zur* and *tild*, Hindústání and Bengali *soná*, Turkish *altún*, Malay *amas* or *mas*, Quichua *cùri*, Bugis *ulawöng*, Egyptian *vovβ*, Anamitic *vàng*, Chinese *kin*, Malagasy *volamena*. Compare English *moon*, Latin *luna*, Greek *σεληνη*, Persian *parú*, Turkish *âi*, Sanskrit *chandra*; English *water* (Greek *vδwp*), Latin *aqua*, Malagasy *mandena*, Birmese *re*, Mandchu *mouke*, Bugis *uwae* (Oceanic *vai*), Tonquinese *nou-di*, Chinese *shühy*; English *sea*, Arabic *bahr*, Turkish *dengiz*, Sandwichian *kai*; English *house*, Greek *οικος*, Mandchu *po*, Arabic *bait* (Hebrew *beth*), Marquisian *hae*, *fae*, Chinese *üh*, *fang üh*, *kea*, *chou kea*, Turkish *av*, Bugis *bolah*, Hindústání *ghar*; English *mountain* (Latin *mons*), German *berg*, Greek *opos*, Turkish *tágh*, Pushto *ghar*, Quichua *urcu*; English *bread*, Latin *panis*, Finnish *leipä*, Malay *róti* Chinese *mēn tow*, *mēn paou*, Javanese *redjekki*, Japanese *moci*, Armenian *zhats*, Georgian *puri*, Coptic *oik*, Ethiopic *sifai*, Chilian *cobque*, Mexican *remiou*.

I will conclude with a few remarks upon the statistics of language. Francesco Lopez, a native of South America, who had extensive knowledge of both continents, thought it no rash statement to make, that the idioms, *notabilmente diversi*, of both Americas amounted to at least 1,500.† The Abbé Rozo says that the inhabitants of the two Americas spoke not less than 2,000 languages. Father Kircher informs us that American missionaries make the South American languages amount to 500; while the Abbé Clavigero had cognizance

* Partington, Cyc.

† See Hervas, Cat. Ling., p. 11.

of 35 idioms spoken in Mexico. The *Imperial Dictionary*,* compiled at the instance of the Empress Catherine, which was published in the year 1787, contains a list of 285 words, translated into 51 European, and 149 Asiatic languages. A second edition of this work, in which the words are arranged alphabetically, appeared in 1790-91, in 4 vols., edited by Jankiewitsch de Miriemo. This edition contains, according to some, 279 languages; 171 for Asia, 55 for Europe, 30 for Africa, and 23 for America.† The authors of the *Mithridates* increased the number of known languages and dialects to 2,000; which Friedrich Adelung‡ augmented to 3,066, geographically distributed as follows:—

Asiatic	-	-	-	987
European	-	-	-	587
African	-	-	-	276
American	-	-	-	1,214

3,064§

The numbers of those who speak the different languages made use of in America are thus distributed. English, 11,647,000; Spanish, 10,174,000; Portuguese, 3,740,000; Indian, 7,593,000; French, 1,242,000; Dutch, Danish, Swedish, and Russian, 216,000.||

With respect to the number of words contained in some of the principal languages, in the following, I can only give the approximate number. The Arabic contains about 150,000; the Hindústání, 18,000; the Sanskrit, 27,000; the Malay, 13,000;¶ the Puk'hto or Pus'hto, 22,000;** the Egyptian, 4,000; the Armenian, 30,000; the Turkish, 50,000; the Mandchu, 16,000; the Latin,

* Glossarium Comparativum Linguarum totius Orbis. Petersb., 1787.

+ According to Pott (*Ungleichheit*, p. 230), it contains 277 languages; 185 for Asia, 22 for Europe, 28 for Africa, 15 for America. This would make 280. Max Müller. [It would rather add up 250. R. S. C.]

‡ *Übersicht aller bekannten Sprachen und ihrer Dialekte*, von Friedrich Adelung, 8vo, pp. xiv 186. St. Petersb., 1820.

§ About twenty of the Italian dialects have been reduced to writing, and made known to the press. The dialects of France are almost as numerous as her provinces. Languedoc alone has seven or eight distinct dialects.—Champollion-Figeac reckons the most distinguishable dialects of France at fourteen. The number of modern Greek dialects is carried by some as high as seventy. (Cf. Marsh, p. 678; Sir John Stoddart's *Glossology*, s. 31, and p. 29 and 33.) The principal British dialects are those of Norfolk and Suffolk, Kent, Durham, Gloucestershire, Essex, Yorkshire, Worcestershire, Herefordshire, Dorset, Sussex, Devonshire, Warwickshire, Cornwall, Derbyshire, Westmoreland, Cumberland, Sheffield, Shropshire, Lancashire, Somersetshire, Cheshire, Northumberland, Craven, and the Scottish dialect.

¶ *Encyc. Amer.* (Lieber); Phil., 1820.

** Marsden's *Dictionary* gives about 6,000; Crawford's about 13,000; which includes many proper names.

** Larramendi, in his day, gave the number at 13,365 only.

40,000; the mediæval Latin, 100,000; the Greek, 89,000; the Spanish, 25,000; the Italian, 50,000; the French, 42,000; the Gaelic, 23,000; the Irish, 50,000; the Welsh, 40,000; the Russian, 40,000; the Polish, 24,000; the Anglo-Saxon, 25,000. Flügel, in 1843, estimated the number of German words in his own dictionary at 94,464, of which 65,085 were simple, 29,379 compound. Thommerel gave the number of words in the English dictionaries of Robertson and Webster as 43,566, 29,853 of which he derives from Classical, 13,230 from Teutonic (Anglo-Saxon), and the rest from miscellaneous sources. Todd's edition of Johnson, however, is said to contain 58,000 words, and the later editions of Webster, which contain the particles of the present and perfect, have reached 70,000;* but, if every word were included, the number would probably now exceed 80,000. The Hebrew words in the Old Testament amount to 5,643. The Hindi has exactly 6,000 words;† the languages of the Marquesas and the Sandwich Islands, 6,123; the Provencal, 107,201. The cuneiform inscriptions of Persia contain no more than 379 words, of which 131 are proper names. The vocabulary of the ancient sages of Egypt, as far as it is known to us from the hieroglyphic inscriptions (as given by Bunsen), amounts to about 658 words. The number of hieroglyphic groups in Sharpe's *Egyptian Hieroglyphics* (1861), amounted to 2,030. There are about 450 radicals or sounds in the Chinese language, which by various accents and intonations are raised to 1,263.‡ Mr. Crawford§ says an examination of 4,074 radical words of the dictionary shows that the Malay language is composed of the following lingual elements:—Native Malay words, 2,003; common to the Malay and Javanese, 1,040; Sanskrit, 199; Telinga, 23; Arabic, 160; Persian, 30; Portuguese, 19. He says, further, an examination of the Malay, including its foreign elements, shows that, out of 1,000 words, 285 are common to it and the Javanese; and a similar

* Cf. Marsh's Lectures, p. 182; and Max Müller, p. 271.

† Cf. Dr. Hunter's Hindústāni Dictionary.

‡ The exact number of words contained in the Imperial Dictionary of Khang-hi amounts to 42,718. About one-fourth part has become obsolete, and one-half of the rest may be considered of rare occurrence, thus leaving only about 15,000 words in actual use. The number of the classical characters is 42,718, but many of them are no longer in use in the modern language. (Stanislas Julien.) Cf. Müller.

§ Grammar and Dictionary of the Malay Language, by John Crawford, F.R.S. 8vo, London, 1852. At vol. i, p. 73, speaking of the whole body of the language, he says it contains 516 words from the Sanskrit; 750 from the Arabic; 95 from the Persian; 40 from Tâlugu or Telinga; and 37 from Portuguese. He says, further, that the earliest example of Malay is the Vocabulary of Pigafetta, in 1521, which contains 344 words only, 270 of which can be readily ascertained to be the same language as that spoken at the present day.

one of the Javanese, that 240 out of 1,000 are common to it and the Malay; and that of the Malay 715 parts, and of the Javanese 760, appear to be native.

Professor Müller tells us that Sanskrit grammarians have reduced the whole growth of their language to 1,706 roots;* but he is of opinion that the primitive sounds expressive of different meanings requisite for the etymological analysis of the whole Sanskrit dictionary would not amount to one third of that number, and he doubts whether they may not be reduced even to 500 words; that Renan† has reduced the Hebrew to about the same number; and that Benloew‡ estimates the necessary radicals of Gothic at 600, and of modern German at 250. The Latin primitives contained in the Index Etymologicus of Gesner's *Thesaurus*, amount to 2,400;§ but, as I have before said, they may be reduced to some 900 or 1,000 words. The Greek primitives given by MM. Port Royal amount to 2,200, but might, perhaps, be reduced to about 1,200.

The following tabular form gives the proportions of vowels and consonants in some of the principal languages.¶

		Cons.	Vowels.	
Sandwich Islands	-	1	1·8	
Greek	{ Ionic dial.	1	1·333	
	{ Attic dial.	1	1·006	
Portuguese	-	1·02	1	
Common Arabic	-	1·08	1*	
Italian	-	1·1	1	
Seneca Indians	-	1·18	1	
Chahta Indians	-	1·2	1	
Sanskrit	-	1·2	1*	}
Latin	-	1·2	1	
Hebrew	-	1·2	1*	
Spanish	-	1·24	1	}
Persian	-	1·33	1*	
Malay	-	1·33	1	
French, phonic prop.	-	1·34	1	orthographic 1·27 : 1
Dutch	-	1·5	1	
English, phonic prop.	-	1·51	1	orthographic 1·52 : 1
Swedish	-	1·64	1	
German, phonic prop.	-	1·7	1	orthographic 1·64 : 1

* Benfey, *Grammatik*, § 147. + *Histoire des Langues sémitiques*, p. 138.

† P. 22. § See Vans Kennedy.

|| Ibid.

¶ See *Encyc. Amer.* (Lieber), *Phil.*; 1830, in voc. "Consonants". Those marked with * are counted phonically.